ASU-PTL Photovoltaic Module Qualification

Test Certificate 05072001 is awarded to

Manufacturer: Shanghai Solar Energy S&T Co., Ltd.

Type: S-165D

Models: S-175D, S-170D, S-165D, S-160D, S-155D, S-150D

Specifications: 48 polycrystalline silicon cells, potted Yukita SEC IV junction box, EVA encapsulant, PET backsheet, tempered glass superstrate, and aluminum frame. Maximum system voltage is 1000 V. (See photos on back.)

Tested type:	S-165D	Sampling:	Eight unconditioned test samples
Samples received:	5/9/05		
Tests conducted from:	5/11/05	To:	7/18/05

Certificate #0921-01
Since 6/23/97

Tests conducted at: PTL, 7349 E. Unity Avenue, Mesa, Arizona, 85212
This laboratory is accredited by the American Association for Laboratory Accreditation (A2LA).

Manufacturer's Address: Shanghai Solar Energy Scientific & Technological Co., Ltd., 555 ShenNan Rd., XinZhuang Industry Park, Shanghai, China 201108

Test data and analysis detailed in Test Report #: 05072001 PTL Project: SSE05002

Certificate Issue Date: July 20, 2005

The *Arizona State University Photovoltaic Testing Laboratory (ASU-PTL)* acknowledges that the above model(s) of photovoltaic modules have been subjected to and passed the minimum requirements defined in test standard(s):

1. IEC 61215: *Design qualification and type approval for crystalline silicon terrestrial photovoltaic (PV) modules [1993-04].*

Models listed above qualified based upon IEC/TC82/WG2 Retest Guidelines [5/17/00] and IEC/TC82/WG2 Type and Model Conventions [4/16/02].

All tests in the above listed test standard(s) are within the ASU-PTL's scope of accreditation. Exception(s): None

Deviations from, additions to, or exclusions from aforementioned test standard(s): (1.) Test program included UV test per IEC61345 [1998-02].
(2.) Test program added wet leakage current test per IEC61215 [2005-04], section 10.15.

This test certificate may be used by the manufacturing company for its own purposes. However, the ASU-PTL cannot accept any legal responsibility from such use.
If the tested type undergoes any future design or process modifications, limited re-testing is required to maintain valid certification according to the applicable Retest Guidelines.

G. Tamizhmani	Liang Ji	Todd W. Arends
Dr. Govindasamy Tamizh-Mani, Director	Liang Ji, Laboratory Manager	Todd Arends, Test Manager
Certifying Authority	Certifying Witness	Certifying Witness